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EXAMINER

PEREZ, ANGELICA

ART UNIT PAPER NUMBER

2684

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/900,132	<b>Applicant(s)</b> KAWAMURA, KATSUAKI	
	<b>Examiner</b> Angelica M. Perez	<b>Art Unit</b> 2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 September 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 and 28-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 and 28-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed 9/19/2005 have been fully considered but they are not persuasive.

In the remarks, applicant argued in substance:

(A) "...claim 1 states that a vibration control unit generates a driving signal from an audio signal and causes a vibration notification unit to vibrate according to the driving signal. Also, the claim states that the vibration control unit modifies the audio signal to produce a modified audio signal and outputs the modified audio signal as the drive signal."

In response to argument (A), the examiner would like to point where given the broadest interpretation possible of the cited limitation, the previous art of record reads in the particular limitations. The examiner has further expanded below, the rejection explanation.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 14 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uriya (Uriya, Susumu; US Patent No.: 6,574,489) in view of Tsutsumi (Tsutsumi,

Sei; JP Patent No.: 59,010,091 A), and further in view of Brisebois (Brisebois et al.; EP 0,866,592 A2).

Regarding claim 1, Uriya teaches of an information communication apparatus comprising: an information communication unit for transmitting and receiving information through communication (column 2, lines 23-25); a vibration notification unit for vibrating to notify the reception of the information (column 2, lines 29-35 and 62-65).

Uriya does not specifically teach of a vibration control unit for generating from an audio signal a driving signal synchronously with the audio signal, the vibration control unit for causing the vibration notification unit to vibrate according to the driving signal.

In related art concerning a headphone, Tsutsumi teaches of a vibration control unit for generating from an audio signal a driving signal synchronously with the audio signal (Abstract, where the vibrator is activated, driven by the sound), where the vibration control unit modifies the audio signal to produce a modified audio signal (abstract, where the audio signal is modified into a vibratory signal), and where the vibration control unit outputs the modified audio signal as a driving signal (Abstract, where the vibrations become the driving signals).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Uriya's information communication unit with Tsutsumi's vibration control unit activated by an audio driver in order to provide a "lively feeling to the headphone through the actual sense", as taught by Tsutsumi.

Uriya and Tsutsumi do not specifically teach the vibration control unit for causing the vibration notification unit to vibrate according to the driving signal.

In related art concerning a personal communication device and call processing status signaling method, Brisebois teaches where the vibration control unit for causing the vibration notification unit to vibrate according to the driving signal (column 3, lines 16-29 and 40-47; where the notification unit vibrates according to the driving signal).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Uriya's and Tsutsumi's personal communication device with Brisebois's vibration according to the driving signal in order to create a pattern of simulation that will inform rather than alarm the user, as taught by Brisebois.

Regarding claim 14, Uriya in view of Tsutsumi, and further in view of Brisebois teaches all the limitations according to claim 1. In addition, Uriya teaches where the information communication apparatus further comprises a speaker for outputting the audio signal (figure 2, item 141; column 2, lines 52-55).

Regarding claim 28, Uriya in view of Tsutsumi, and further in view of Brisebois teaches all the limitations according to claim 1. Uriya further teaches where the audio signal comprises a music signal (column 8, lines 39-43). Tsutsumi further teaches where the vibration control unit modifies the music signal to produce a modified music signal (abstract, where the audio signal is modified into a vibratory signal), and where the vibration control unit outputs the modified audio signal as a driving signal (Abstract, where the a vibrations become the driving signals).

3. Claims 15-16, 19-20 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uriya (Uriya, Susumu; US Patent No.: 6,574,489) in view of Tsutsumi (Tsutsumi, Sei; JP Patent No.: 59,010,091 A

Regarding claim 15, Uriya teaches of a communication apparatus, comprising: a receiver circuit that receives communication information (figure 7, items 21a and 22a; column 2, lines 23-25); a vibrator that vibrates to notify reception of the communication information (column 2, lines 29-35 and 62-65).

Uriya does not specifically teach of a control circuit that generates a driving signal based on audio signal, where the control circuit instructs the vibration to vibrate according to the driving signal.

In related art concerning a headphone, Tsutsumi teaches of a control circuit that generates a driving signal based on audio signal, where the control circuit instructs the vibration to vibrate according to the driving signal (Abstract, where the vibrator is activated, driven by the sound), where the vibration control unit modifies the audio signal to produce a modified audio signal (abstract, where the audio signal is modified into a vibratory signal), and where the vibration control unit outputs the modified audio signal as a driving signal (Abstract, where the vibrations become the driving signals).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Uriya's information communication unit with Tsutsumi's vibration control circuit activated by a driving signal in order to provide a "lively feeling to the headphone through the actual sense", as taught by Tsutsumi.

Regarding claim 16, Uriya in view of Tsutsumi teaches all the limitations according to claim 15. Uriya further teaches where the audio signal comprises music (column 8, lines 39-43).

Regarding claim 19, Uriya in view of Tsutsumi teaches all the limitations according to claim 15. Uriya further teaches of a speaker, where the audio is output via the speaker (figure 2, item 141; column 2, lines 52-55).

Regarding claim 20, Uriya in view of Tsutsumi teaches all the limitations according to claim 16. In addition, Uriya teaches where the communication apparatus further comprises a speaker, where the control circuit causes the music to be output via the speaker (figure 2, item 141; column 2, lines 52-55).

Regarding claim 29, Uriya teaches of a communication apparatus (figure 7), comprising: a receiver circuit that receives communication information (figure 7, items 21a and 21 b); a vibrator that vibrates to notify reception of the communication information (figure 7, item 43), and a control circuit (figure 7, item 60).

Uriya does not teach where the control circuit modifies an audio signal to produce a modified audio signal and that outputs the modified audio signal as a driving signal, where the control circuit instructs the vibrator to vibrate according to the driving signal.

In related art concerning a headphone, Tsutsumi teaches where an audio signal to produce a modified audio signal and that outputs the modified audio signal as a driving signal, where the control circuit instructs the vibrator to vibrate according to the driving signal (Abstract, where the sound is modified in order to vibrate). It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Uriya's information communication unit with Tsutsumi's modified audio signal

in order to provide a "lively feeling to the headphone through the tactual sense", as taught by Tsutsumi.

Regarding claim 30, Uriya in view of Tsutsumi teaches all the limitations according to claim 29. Tsutsumi further teaches where the audio signal comprises a music signal, and where the control circuit modifies the music signal to produce a modified music signal, and where control circuit outputs the modified music signal as the driving signal (Abstract, where the a vibrations become the driving signals).

4. Claims 17 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uriya in view of Tsutsumi as applied to claim 16 above, and further in view of Yamashita (Yamashita, Tomohisa; Patent No.: 6,070,053).

Regarding claim 17, Uriya in view of Tsutsumi teaches all the limitations according to claim 16.

Uriya in view of Tsutsumi does not teach of the communication apparatus further comprising a memory that stores the music.

In related art, concerning ringing sound or melody calling notification in a radio communication system, Yamashita teaches of the communication apparatus further comprising a memory that stores the music (column 4, lines 17-20).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Uriya in view of Tsutsumi combined information communication apparatus with Yamashita's memory for storage in order to use the store music in different features of the invention, as taught by Yamashita.



Regarding claim 26, Uriya in view of Tsutsumi teaches all the limitations according to claim 16.

Uriya in view of Tsutsumi does not teach where the music is received over the air from an external source.

In related art, Yamashita further teaches where the music is received over the air from an external source (column 4, lines 41-46 and column 7, lines 17-34; where the base station is an external source).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Uriya in view of Tsutsumi combined information communication apparatus with Yamashita's external source in order to use the music to drive speaker 7, "...thereby performing ringing operation for calling notification", as taught by Yamashita.

5. Claims 2 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uriya in view of Tsutsumi, and further in view of Brisebois as applied to claim 1 above, and further in view of Yamashita (Yamashita, Tomohisa; Patent No.: 6,070,053).

Regarding claim 2, Uriya in view of Tsutsumi, further view of Brisebois teaches all the limitations according to claim 1.

Uriya in view of in view of Tsutsumi, further view of Brisebois does not teach of a music reproduction unit for outputting music as the audio signal.

In related art, related to ringing sound or melody calling notification in a radio communication system, Yamashita teaches of a music reproduction unit for outputting

music as the audio signal (figure 1, item 34; columns 5 and 6, lines 7-21 and 38-40, respectively; and column 9, lines 11-17).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Uriya in view of Tsutsumi, and further view of Brisebois combined information communication apparatus with Yamashita music reproduction unit for outputting music as the audio signal in order to provide notification of music data received in the message, as taught by Yamashita.

Regarding claim 10, Uriya in view of Tsutsumi, further in view of Brisebois, and further in view of Yamashita teaches all the limitations according to claim 2. Yamashita further teaches where the information received by the information communication unit includes voice communication data from an external terminal (column 9, lines 11-17) and music data delivered from an external source (column 5, lines 51-56).

Regarding claim 11, Uriya in view of Tsutsumi, in further view of Brisebois, and further in view of Yamashita teaches all the limitations according to claim 10. Yamashita further teaches where the music reproduction unit outputs the music as the audio signal based on the music data delivered from the external source (column 4, lines 41-46 and column 7, lines 17-34; where the base station is an external source).

Regarding claim 12, Uriya in view of Tsutsumi, in further view of Brisebois, and further in view of Yamashita teaches all the limitations according to claim 10. Yamashita further teaches where the information communication apparatus further comprises a memory for storing the music data (column 4, lines 17-20).

Regarding claim 13, Uriya in view of Tsutsumi, in further view of Brisebois, and further in view of Yamashita teaches all the limitations according to claim 12. Yamashita further teaches where the music reproduction unit generates and outputs the music as the audio signal based on the music data in the memory (column 2, lines 51-54).

6. Claims 18 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uriya in view of Tsutsumi and further in view of Saiki (Saiki et al.; US Patent No.: 6,259, 935).

Regarding claim 18, Uriya teaches of a communication apparatus comprising (column 2, lines 23-25): a receiver circuit that receives communication information (figure 7, items 21a and 22a; column 2, lines 23-25); a vibrator that vibrates to notify reception of the communication information (column 2, lines 29-35 and 62-65). Uriya further teaches where the audio signal comprises music (column 8, lines 39-43).

Uriya does not specifically teach of a control circuit that generates a driving signal based on audio signal, where the control circuit instructs the vibration to vibrate according to the driving signal.

In related art concerning a headphone, Tsutsumi teaches of a control circuit that generates a driving signal based on audio signal, where the control circuit instructs the vibration to vibrate according to the driving signal (Abstract, where the vibrator is activated, driven by the sound), where the vibration control unit modifies the audio signal to produce a modified audio signal (abstract, where the audio signal is modified into a vibratory signal), and where the vibration control unit outputs the modified audio signal as a driving signal (Abstract, where the vibrations become the driving signals).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Uriya's information communication unit with Tsutsumi's vibration control circuit activated by a driving signal in order to provide a "lively feeling to the headphone through the actual sense", as taught by Tsutsumi.

Uriya in view of Tsutsumi does not teach where the control circuit instructs the vibrator to vibrate based on low frequency components of the music.

In further art, related to converting a signal into vibration or vibration and sound, Saiki teaches where the vibration control unit generates the driving signal based on low frequency components of the audio signal (figure 4, item fo1 and column 6, lines 24-27).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Uriya in view of Tsutsumi vibration communication unit with Saiki's generation of the driving signal based on the low frequency components of the audio signal with the purpose of generating a vibration as a preferred indicator, as taught by Saiki.

Regarding claim 24, Uriya teaches of a communication apparatus comprising (column 2, lines 23-25): a receiver circuit that receives communication information (figure 7, items 21a and 22a; column 2, lines 23-25); a vibrator that vibrates to notify reception of the communication information (column 2, lines 29-35 and 62-65).

Uriya does not specifically teach of a control circuit that generates a driving signal based on audio signal, where the control circuit instructs the vibration to vibrate according to the driving signal.

In related art concerning a headphone, Tsutsumi teaches of a control circuit that generates a driving signal based on audio signal, where the control circuit instructs the vibration to vibrate according to the driving signal (Abstract, where the vibrator is activated, driven by the sound).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Uriya's information communication unit with Tsutsumi's vibration control circuit activated by a driving signal in order to provide a "lively feeling to the headphone through the actual sense", as taught by Tsutsumi.

Uriya in view of, in further in view of Tsutsumi does not specifically teach where the vibrator vibrates with a resonance frequency, where the control circuit comprises a filter that passes the resonance frequency, and where the filter filters the audio signal.

In further art related to converting a signal into vibration or vibration and sound, Saiki teaches the vibrator vibrates with a resonance frequency, where the control circuit comprises a filter that passes the resonance frequency, and where the filter filters the audio signal (column 6, lines 24-37).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Uriya's in view of Tsutsumi's vibration communication unit with Saiki's vibrator that vibrates with a resonance frequency, where the control circuit comprises a filter the audio signal in order to separate the signals according to the preferred annunciator.

Regarding claim 25, Uriya in view of Tsutsumi and further in view of Saiki teaches all the limitations according to claim 18. Also, Saiki teaches where the vibrator

vibrates with a resonance frequency, where the control circuit comprises a low pass filter that passes the resonance frequency, and where the filter filters the music (figure 7, item 19; columns 11-12, lines 67 and 1-14, respectively).

7. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uriya in view of Tsutsumi, in further in view of Brisebois and further in view of Yamashita as applied to claim 2 above, and further in view of Kanamori (Kanamori et al.; US Patent No.: 6,662,022).

Regarding claim 4, Uriya in view of Tsutsumi, in further in view of Brisebois and further in view of Yamashita teaches all the limitations according to claim 2.

Uriya in view of Tsutsumi, in further in view of Brisebois and further in view of Yamashita does not teach where the music reproduction unit stops music reproduction if the information communication unit receives the information during music reproduction.

In related art concerning a portable telephone set capable of recognizing a call during music replay, Kanamori teaches where the music reproduction unit stops music reproduction if the information communication unit receives the information during music reproduction (column 9, lines 59-64).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Uriya's in view of Tsutsumi's, in further in view of Brisebois's and further in view of Yamashita's music reproduction unit with Kanamori's teachings where the music reproduction unit stops music reproduction if the information

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communication unit receives the information during music reproduction; in this manner, the user is able to avoid missing the information, as taught by Kanamori.

Regarding claim 5, Uriya in view of Tsutsumi, in further in view of Brisebois and further in view of Yamashita teaches all the limitations according to claim 2.

Uriya in view of Tsutsumi, in further in view of Brisebois and further in view of Yamashita does not teach where the music reproduction restarts when the incoming status detection unit detects that the information communication unit completes receiving the information, if the information is received during music reproduction.

In related art concerning a portable telephone set capable of recognizing a call during music replay, Kanamori teaches where the music reproduction restarts when the incoming status detection unit detects that the information communication unit completes receiving the information, if the information is received during music reproduction (columns 9 and 10; lines 65-67 and 1, respectively).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Uriya's in view of Tsutsumi's, in further in view of Brisebois's and further in view of Yamashita's music reproduction unit with Kanamori's completing receiving the information in order to receive the message when the user does not answers the call, as taught by Kanamori.

Claims 3, 6-8, are rejected under 35 U.S.C. 103(a) as being unpatentable over Uriya in view of Tsutsumi, further in view of Brisebois, and further in view of Saiki (Saiki et al.; US Patent No.: 6,259, 935).

Regarding claim 3, Uriya teaches of an information communication apparatus comprising: an information communication unit for transmitting and receiving information through communication (column 2, lines 23-25); a vibration notification unit for vibrating to notify the reception of the information (column 2, lines 29-35 and 62-65); and a music reproduction unit for outputting music as the audio signal (column 8, lines 39-51 and figure 2, item 151).

Uriya does not specifically teach of a vibration control unit for generating from an audio signal a driving signal synchronously with the audio signal, the vibration control unit for causing the vibration notification unit to vibrate according to the driving signal.

In related art concerning a headphone, Tsutsumi teaches of a vibration control unit for generating from an audio signal a driving signal synchronously with the audio signal (Abstract, where the vibrator is activated, driven by the sound).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Uriya's information communication unit with Tsutsumi's vibration control unit activated by an audio driver in order to provide a "lively feeling to the headphone through the actual sense", as taught by Tsutsumi.

Uriya and Tsutsumi do not specifically teach the vibration control unit for causing the vibration notification unit to vibrate according to the driving signal.

In related art concerning a personal communication device and call processing status signaling method, Brisebois teaches where the vibration control unit for causing the vibration notification unit to vibrate according to the driving signal (column 3, lines 16-29 and 40-47; where the notification unit vibrates according to the driving signal).



It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Uriya's and Tsutsumi's personal communication device with Brisebois's vibration according to the driving signal in order to create a pattern of simulation that will inform rather than alarm the user, as taught by Brisebois.

Uriya in view of Tsutsumi, further in view of Brisebois, does not specifically teach where the vibration control unit generates the driving signal based on low frequency components of the audio signal.

In further art, related to converting a signal into vibration or vibration and sound, Saiki teaches where the vibration control unit generates the driving signal based on low frequency components of the audio signal (figure 4, item fo1 and column 6, lines 24-27).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Uriya's, Tsutsumi's, Brisebois's, vibration communication unit with Saiki's generation of the driving signal based on the low frequency components of the audio signal with the purpose of generating a vibration as a preferred indicator, as taught by Saiki.

Regarding claim 6, Uriya in view of Tsutsumi, further in view of Brisebois, and further in view of Saiki teaches all the limitations according to claim 3. In addition, Saiki teaches where the vibration notification unit comprises a vibration unit for vibrating with a self-resonance frequency; and where the vibration control unit comprises a low pass filter having a passing frequency band for passing the low frequency components including the self-resonance frequency; and of the vibration unit (column 6, lines 24-37).

Regarding claim 7, Uriya in view of Tsutsumi, further in view of Brisebois, and further in view of Saiki teaches all the limitations according to claim 3. Also, Saiki teaches where the vibration control unit comprises a low pass filter having a passing frequency band for passing the low frequency components of the audio signal (figure 7, item 19; columns 11-12, lines 67 and 1-14, respectively).

Regarding claim 8, Uriya in view of Tsutsumi, further in view of Brisebois, and further in view of Saiki teaches all the limitations according to claim 7. Also, Saiki teaches where the vibration control unit further comprises an amplifier for amplifying the low frequency components passing through the low pass filter (figure 5, item 14; column 8, lines 54-60).

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Uriya in view of Tsutsumi, further in view of Brisebois, further in view of Saiki, and further in view of Osuge (Osuge, Michihiro; US Patent NO.: Kanamori et al.; US Patent No.: 6,1195,571).

Regarding claim 9, Uriya in view of Tsutsumi, in further in view of Brisebois, further in view of Saiki, teaches all the limitations according to claim 8.

Uriya in view of Tsutsumi, further in view of Brisebois, further in view of Saiki, does not teach where the vibration control unit further comprises a rectifier for rectifying the low frequency components output from the amplifier to generate the driving signal.

In related art, regarding automatic switching notification devices, Osuge teaches where the vibration control unit further comprises a rectifier for rectifying the low

frequency components output from the amplifier to generate the driving signal (figure 7, item 51 and column 6, lines 12-20).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Uriya's, Tsutsumi, Brisebois and Saiki vibration control unit with Osuge's rectifier in order to rectify the low frequency components output from the amplifier to generate the driving signal.

9. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uriya in view of Tsutsumi, and further in view of Kanamori.

Regarding claim 21, Uriya in view of Tsutsumi teaches all the limitations according to claim 20.

Uriya in view of Tsutsumi does not teach where the control circuit causes the music to stop being output via the speaker when the receiver circuit receives the communication information while the music is output via the speaker.

Kanamori further teaches where the control circuit causes the music to stop being output via the speaker when the receiver circuit receives the communication information while the music is output via the speaker (column 2, lines 49-52; e.g., "may not replay the replayed music" corresponding to "stop" and column 9, lines 59-64).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Uriya in view of Tsutsumi music reproduction unit with Kanamori's teachings where the music reproduction unit stops music reproduction if the information communication unit receives the information during music reproduction; in this manner, the user is able to avoid missing the information, as taught by Kanamori.

Regarding claim 22, Uriya in view of Tsutsumi and further in view of Kanamori teaches all the limitations according to claim 21. Kanamori further teaches where the control circuit detects a beginning of receipt of the communication information and a completion of the receipt of the communication information, where the control circuit causes the music to stop being output via the speaker when the control circuit detects the beginning of the receipt of the communication information (column 2, lines 49-52; e.g., “may not replay the replayed music” corresponding to “stop” and column 9, lines 59-64), and where the control circuit causes the music to be output via the speaker when the control circuit detects the completion of the receipt of the communication information (columns 9 and 10; lines 65-67 and 1, respectively).

Regarding claim 23, Uriya in view of Tsutsumi and further in view of Kanamori teaches all the limitations according to claim 22. Kanamori further teaches where when the control circuit detects the completion of the receipt of the communication information, the control circuit causes the music to be output via the speaker from a point at which the music stopped being output via the speaker when the communication information began to be received (columns 9 and 10; lines 65-67 and 1, respectively).

***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US Patent No.: 6,603,863 B1; refers to a headphone apparatus and method for providing dynamic sound with vibrations.

JP Patent No.: 359010091 A; deals with a headphone capable of providing tactual sense of reproduced music.

US Patent No.: 4,813,419; refers to an apparatus having a vibrator that vibrates according to applied sound waves.

US Patent No.: 4,250,637; refers to a tactile aid to speech reception apparatus.

12. Any inquiry concerning this communication or earlier communications from the

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examiner should be directed to Angelica Perez whose telephone number is 703-305-8724. The examiner can normally be reached on 7:15 a.m. - 3:55 p.m., Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 703-308-7745. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and for After Final communications.

Information regarding Patent Application Information Retrieval (PAIR) system can be found at 866-217-9197 (toll-free)."

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600's customer service number is 703-306-0377.

  
Angelica Perez  
(Examiner)

  
NAY MAUNG  
SUPERVISORY PATENT EXAMINER

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November 17, 2005